DOCUMENT RESUME

ED 450 203 UD 034 025

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TITLE	Immigrants and Wealth Stratification in the U.S. JCPR Working Paper 216.
INSTITUTION	Joint Center for Poverty Research, IL.
SPONS AGENCY	National Science Foundation, Arlington, VA.
PUB DATE	2001-01-00
NOTE	35p.
CONTRACT	SBR-9819209
AVAILABLE FROM	For full text: http://www.jcpr.org.
PUB TYPE	Reports - Research (143)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Age Differences; Human Capital; *Immigrants; *Income; *Minority Groups; Racial Factors; *Social Stratification; *Socioeconomic Status
IDENTIFIERS	*Wealth

ABSTRACT

This study examines the importance of including immigrants in studies of wealth stratification by race/ethnicity, using data from the 1992 and 1993 panels of the Survey of Income and Program Participation. It addresses the uniqueness of immigrants using descriptive and multivariate analyses by constructing a measure of wealth age that considers immigrants' length of residence in America and by considering migration and adoption history and immigrant-native differences in factors sorting wealth accumulation. Descriptive analysis show greater difference in wealth distribution, zero and negative wealth holdings, wealth components, and age-wealth profiles by race/ethnicity than by immigrant status. Age-wealth profiles are steeper for immigrants than for the native born when using wealth age. The multivariate analysis uses a framework integrating life cycle theory, status attainment theory, human capital theory, and theories related to social contexts. Results show a positive effect of immigrant status on wealth accumulation, rather than the impairing effects of racial/ethnic minorities. Migration and adaptation history are factors in wealth accumulation. Significant structural differences exist between immigrants and natives (a lesser role of education and spatial segregation in wealth accumulation for immigrants) and between whites and minorities (a greater role of education for minorities). (Contains 36 references.) (SM)

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IMMIGRANTS AND WEALTH STRATIFICATION IN THE U.S.*

JCPR WORKING PAPER 216

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January 2001

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IMMIGRANTS AND WEALTH STRATIFICATION IN THE U.S.

Abstract

This study examines the importance of including immigrants in studies of wealth stratification by race-ethnicity in the United States. We address the uniqueness of immigrants in both our descriptive and multivariate analyses. In the former, we construct a measure of "wealth age" that takes into account immigrants' lengths of residence in the U.S. For the latter, we consider immigrants' migration and adaptation history and the immigrant-native differences in factors sorting wealth accumulation. Our descriptive analysis shows greater differences in wealth distribution, zero and negative wealth holdings, wealth components, and age-wealth profiles by race-ethnicity than by immigrant status. The age-wealth profiles are steeper for immigrants than for the native-born when "wealth age" is used. The multivariate analysis uses a framework integrating life cycle theory, status attainment theory, human capital theory, and theories related to social contexts. Our study finds a positive effect of immigrant status on wealth accumulation, in contrast to the impairing effects of race-ethnic minorities. Immigrants' migration and adaptation history also plays a role in their wealth accumulation. In addition, our analysis reveals significant structural differences between immigrants and natives—a lesser role of education and spatial segregation in wealth accumulation for immigrants—and between whites and minorities—a greater role of education for minorities. Implications for social stratification, spatial segregation, and immigrant assimilation are discussed.

IMMIGRANTS AND WEALTH STRATIFICATION IN THE U.S.

INTRODUCTION

Wealth is an important indicator of socioeconomic status. Oliver and Shapiro (1995) termed wealth and income as the "twin pillars" of the foundation of American middle class status. Traditional wealth analysis focuses on aggregate distribution of wealth and inequality. However, micro-level studies of wealth have recently captured the growing interest of social scientists, especially those interested in racial stratification and cultural difference (Oliver and Shapiro 1995; Wolff 1998; Conley 1999). This study takes as its central question whether or not including immigrants is important in studies of wealth stratification by race-ethnicity. That is to what extent do immigrant patterns of wealth accumulation shed light on more general issues for understanding wealth stratification. We examine two specific aspects of the question: the extent to which wealth accumulation differs by immigrant status and the structural differences in factors of wealth accumulation between immigrants and native-born Americans.

This study contributes to the literature on social stratification in three ways. First, by expanding the examination of wealth beyond the black-white disparity in wealth to other race-ethnic minorities as well as immigrants, it represents one of the first attempts to broaden our understanding of the uneven distribution of wealth by race-ethnicity. Second, the considerations of immigrants offers a strategic opportunity to study variation in social contexts of wealth accumulation. Third, by examining how wealth accumulation differs between immigrants and native-born Americans as a whole and within race-ethnicity, this study provides new implications for social stratification.

Traditionally the areas of income, earnings, and occupational attainment have been used in studying immigrants' economic achievement. This study investigates wealth, a less volatile

and more permanent measure of economic achievement, which serves as a buffer against the ups and downs of daily life. In addition, economic well-being is indicated by how income and earnings are used to accumulate wealth. Some immigrant groups, like Chinese, Japanese, Koreans, Indians, and early Cuban refugees, used earnings to build infrastructure and businesses that benefited themselves as well as their ethnic compatriots in wealth accumulation. Other groups like Mexicans, perhaps partly because of lower human capital at the start, seldom achieved a state of solid economic independence. This study examines how coethnic social contexts in local communities affect immigrants' wealth accumulation. Thus, our analysis provides new information on immigrants' assimilation and adaptation with the distribution of wealth, the age-wealth profiles and wealth compositions for race-ethnic groups of immigrants. Further it estimates the structural differences between immigrants and non-immigrants in the effects of socioeconomic, human capital and social context factors in shaping wealth accumulation.

THEORETICAL FRAMEWORK AND HYPOTHESES

One dominant model of wealth accumulation is the life cycle hypothesis (Modigliani and Brumberg 1954; Modgliani 1986). According to the life cycle model, an individual saves and accumulates wealth until retirement and then consumes the accumulated wealth, given the average life expectancy and the uncertainty about the end of life. This literature has focused on the age-wealth profiles and emphasizes the non-linear quadratic age function in wealth accumulation. Some empirical evidence supports a quadratic age effect (Land and Russell 1996), but other evidence favors a linear effect (Kurz 1984; Menchik and David 1983; Danziger, van der Gaag, Smolensky and Taussig 1982).

Beyond age, the main explanatory variable in the life cycle model, status attainment theory and human capital theory examine social structural factors, which enable individuals to accumulate wealth. Social origins, including parental human capital and wealth, determine individual human capital (Conley 1999), which opens up the way for the individual to secure social status (Treiman 1992; Becker 1991; Grusky and DiPrete 1990; Blau and Duncan 1967). Empirical research has found that the race-ethnicity and social class of the origin family and an individual's educational level, work experience, and family structure affect earning capacity, consumption tastes, and saving styles, all of which contribute to wealth accumulation across the life cycle (e.g., Land and Russell 1996; Conley 1999).

While status attainment theory and human capital theory focus mainly on the micro-process of wealth accumulation, clearly the social contexts in which the micro-process takes place is important. Institutional barriers and social discrimination, for example, can block certain racial minorities from achieving higher social status. This perspective forms the backbone of theories such as dual labor market (Doeringer and Piore 1971; Sakamoto and Chen 1991), queuing (Kaufman 1999; Reskin and Roos 1990; Lieberson 1980); dual housing market (Alba and Logan 1991), spatial mismatch (Wilson 1987), spatial segregation (Massey and Denton 1993; Massey 1981), and ethnic economy (Sanders and Nee 1987; Bonacich 1973). Spatial segregation and ethnic economy are particularly relevant for immigrants for two reasons. First, the settlement of immigrants in their own social networks perpetuates spatial segregation (Massey et al., 1994). Second, an ethnic economy further deepens spatial segregation by keeping coethnic immigrants within the ethnic economy and offering coethnic immigrants unique economic opportunity (Sanders and Nee 1987; Borjas 1994; Portes and Rumbout 1996).

This paper integrates the life cycle hypothesis, status attainment theory, human capital theory, and theories related to social contexts to develop hypotheses regarding wealth

accumulation. In developing hypotheses, we pay particular attention to immigrants' situations, especially those which are sharply different from the native-born.

Our first hypothesis concerns the role of age in prescribing wealth profiles. Wealth accumulation begins in early adulthood, around age 25, after finishing school and entering the labor market. The tipping point of the age-wealth profile, when the slope changes from positive to negative, is around the retirement age. This age pattern does not hold for immigrants unless we modify it in two ways. First, age at arrival indicates the stage of life to start accumulating wealth, an actuarial fact that hampers immigrants uniquely. Most first-generation immigrants do not have inherited wealth in the U.S. To start accumulating wealth at a later age is a disadvantage in that they have not had time to accumulate substantial nest eggs. Thus we predict that for immigrants it is the age at arrival and years of U.S. residence that describe how immigrants accumulate wealth. The earlier age at arrival and the longer the period of residence, the greater the wealth an immigrant accumulates. Second, many immigrant cultures emphasize the collectivity of the family and the need to enhance the education of the younger generation and leave a greater inheritance to the younger generation. Thus immigrants are more willing to defer or limit consumption in favor of younger family members. Unlike the individualistic rationality of saving before retirement and dissaving during retirement according to the American model, immigrants are likely to continue to save during retirement. For these reasons we predict that the tipping point occurs at a later age for immigrants than for native-born Americans. Overall, Hypothesis 1 predicts a quadratic age effect on wealth accumulation but proposes a later tipping point and the importance of age at arrival and length of U.S. residence for immigrants.

According to status attainment and human capital theory, low socio-economic status (race-ethnic minorities and non-traditional family structure) and low level of human capital

(lower education and work experience) limit wealth accumulation. For immigrants, education obtained in the home country is discounted in the U.S and work experience in the home country may not be easily transferable to the U.S. Thus education may have differential effects on wealth accumulation between immigrants and natives and age at arrival in part captures the discounted effect of work experience for immigrants. In addition, immigrants attain unique socio-economic status in their adaptation process, which influences their wealth accumulation. For example, naturalization is an indicator of social integration into the mainstream host society and better English skills, which may promote wealth accumulation. Immigrant-native intermarriage, also more likely for young immigrants, allows greater access to the native society and to information and thus predicts greater wealth. Thus, Hypothesis 2 makes the standard predictions concerning the effects of socioeconomic status and human capital variables on wealth accumulation but notes the discounted effect of human capital for immigrants and the effects of unique characteristics of immigrants.

Our third hypothesis switches the focus from a micro to a macro process, particularly the social contexts in which individuals are located. Spatial segregation has clear implications for native minorities. That is, the more severe the spatial segregation, the greater the institutional barriers native minorities encounter and the less successful they are in accumulating wealth. Things are more complicated for immigrants, however. Given their poor English proficiency and their limited knowledge of the mainstream American labor market at the time of their arrival, an ethnic economy plus increased coethnic contact may be a blessing. At the same time, a long history of working within an ethnic economy may evolve into a barrier blocking immigrants from developing the kind of human capital desired by the mainstream labor market and eventually from entering the mainstream labor market at all. The total effect of social contexts for immigrants depends on which effect dominates. The constraints appear to be greater than the

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opportunities in the long run since wealth accumulation is a long-term consequence of saving and the mainstream labor market offers greater rewards in terms of wages, job protection, union membership, health insurance and pension. Thus Hypothesis 3 predicts a detrimental effect of spatial segregation for native-born Americans and immigrants but notes that it should be weaker for immigrants.

Finally our fourth hypothesis focuses directly on how immigrant status affects wealth accumulation. Two theoretical approaches—discrimination against immigrants and self-selection of immigrants—offer competing hypotheses in this topic. History has shown that immigrants are vulnerable to being blamed for economic problems, such as economic recession or the low incomes of native unskilled workers (Smith and Edmonston 1997). Immigrants are also subject to discrimination because of poor English skills, strong accents, and unique cultural or religious practices (Portes and Rumbaut 1996). These barriers can block successful wealth accumulation. However, a migrant selection thesis proposes the opposite—legal immigrants have a stronger motivation for upward mobility than do their native counterparts (Chiswick 1978; Jasso and Rosenzweig 1990; Jasso et al. 2000).[1] This argument is consistent with the voluntary vs. involuntary minorities argument (Ogbu and Simons 1998), which emphasizes the choice made by legal immigrants to seek better opportunities in the U.S. The selection of immigrants leads to their success in spite of their disadvantages. An exception may be Refugees who differ from legal immigrants in that they were pushed to come to the U.S. by political or religious persecution or civil wars. Arriving at the U.S. in a crisis without the strong motivation for economic advancement may slow their speed of wealth accumulation. Thus, Hypothesis 4

[1] Borjas (1987, 1994) argued that not all immigrants are more skilled or motivated (positively selected), depending upon the relative inequality of the sending and receiving countries. For example, illegal Mexican immigrants are more likely to be less skilled on average (negatively selected). Unfortunately the SIPP data do not permit an identification of illegal status.

predicts that the selection effect outweighs the discrimination effect and immigrant status produces a total positive effect on wealth accumulation though refugee status may counteract such a positive effect.

In addition to testing these four hypotheses, our study undertakes four types of descriptive analysis. First it examines wealth differences by race-ethnicity and immigrant status. Besides the total net worth (total assets minus total liability), it examines financial net worth (net worth minus principal residence equity) since this reflects the resources that may be immediately available for consumption or investment. Wolff (1998) shows that minorities have little financial net worth. This may also be true for immigrants.

Second, age-wealth profiles are compared by immigrant status, by race-ethnicity, and by both immigrant status and minority status. In addition to conventional age, we use the "wealth age" for immigrants (equivalent to the length of U.S. residence for immigrants who arrived after age 25[2]). This offers a more valid comparison with the native age-wealth profile (starting from age 25).

Third, the study distinguishes between negative and zero net worth. A few words are needed to further elaborate the net worth scale. It is not monotonic because "zero" and "negative" have special connotations with respect to net worth. "Zero" means not only no assets but also no liabilities, whereas "negative" means greater liabilities than assets. A person who wishes to pursue further education may assume a student loan with the expectation of paying it off based on their greater earning capacity in the future. In another case, a person wishing to enhance his/her earnings by running a small business assumes a business loan. In both cases, the negative net worth signals future productivity and capacity for accumulating wealth (Land and

[2] The median level of total net worth at age 25 is very low among native-born Americans.

Russell 1996). Therefore "negative" net worth may signal a better prospect of future positive net worth than "zero" net worth.

Fourth, the study performs a compositional analysis of assets and debts. While not included in the wealth literature, business gross value and debts are included in this study since the immigration literature has documented the importance of the ethnic economy and immigrant entrepreneurship (Sanders and Nee 1993; Portes and Rumbout 1996).

DATA AND METHODS

The analysis uses data from the 1992 and 1993 panels of the Survey of Income and Program Participation (SIPP). The SIPP is a multi-panel, longitudinal survey of adults (age 15 and over) in households (U.S. Bureau of the Census 1991). The 1992 and 1993 panels each consist of about 20,000 nationally representative households. The SIPP collects data every four months by interviewing the original sample adults and other individuals with whom they reside (U.S. Bureau of the Census 1998). The core questions in each interview cover demographic and socioeconomic characteristics, and types and amounts of earned and unearned income. Together these provide information to measure the socioeconomic determinants and covariates of wealth accumulation. Information on migration history and a detailed array of assets and liabilities is available in topical modules, asked once during the life of the panel. The Migration History module asks where each adult in the household was born in the U.S., or if born abroad, the country of birth and the year of arrival in the U.S. We use this information to identify immigrant status, refugee status, age at arrival at the U.S., and length of U.S. residence. Other topical modules provide information on shelter costs, vehicles, interest-generating assets, other assets, and liabilities from which we derive measures of wealth and wealth components. To measure

social contexts, this study uses the 1990 long-form census data to construct measures of spatial patterns, which are merged with the SIPP data using county of residence.

The unit of analysis in this study is minimal households. They are the smallest identifiable units within households that have the potential to reside independently of others (Van Hook et al. 1999). Within a household, the primary family, related or unrelated subfamilies, primary individual, and related or unrelated secondary individual adults can be separated out as minimal households. Using minimal households as the unit of analysis enables us to better compare wealth holdings between immigrants and natives because immigrants are more likely to live in multi-generation families or to live in households as boarders. A unit is called "immigrant" if either the husband or wife was foreign-born in the case of family units, or if the individual is foreign-born in the case of one-person units. A unit is called "native" if both spouses were native born in two-parent units or the head was native-born in a single-parent unit, or the individual was native-born in an individual unit.

Both core and topical module data of the SIPP and the 1990 long-form census data are used to measure the three blocks of variables: (1) wealth, (2) socioeconomic status and human capital, and (3) social contexts.

- *Wealth.* Wealth consists of assets and liabilities. The SIPP information on assets and debts is basically on an individual basis. Where joint accounts occur (usually between spouses), we assume an equal share for each member of the joint account. A unit-specific component of wealth is obtained by summing up the same component for all the members of the unit. Combining the standard economic analysis of wealth (e.g., Wolff 1998), the potential different features of wealth accumulation among immigrants, and the specific features of the SIPP wealth data, the analysis uses the following two versions of net worth: total net worth, defined as total assets minus total liabilities, and financial net worth, defined as net worth minus the principal

residence equity. The latter is a measure of liquidity. Assets consist of nine components: (1) principal residence gross value, (2) vehicle gross value, (3) business gross value, (4) interest-generating accounts, (5) non-interest-generating accounts, (6) stocks and mutual funds, (7) real estate gross value, (8) retirement accounts, and (9) other assets. Liabilities are a sum of four components: (1) mortgage on principal residence, (2) business debts, (3) other secured debts, and (4) unsecured debts.

• *Socioeconomic Status and Human Capital*. We define immigrant status as foreign-born (including refugees). Both immigrants and natives fall in five race-ethnicity groups: non-Hispanic white, non-Hispanic black, Hispanic, Asian, and others.

To more appropriately compare the age-wealth profile gap between immigrants and the native-born in our descriptive analysis, we define a measure called "wealth age". "Wealth age" starts from age 25 for natives and immigrants who arrived in the U.S. before age 25 and from the age at arrival for immigrants who arrived in the U.S. at age 25 or older. For example, the "wealth age" for a native-born man is 1 when he is 25 years old and 42 when he is 66 years old. However, for an immigrant man who arrived at the U.S. at age 30, the "wealth age" is 1 when he is 31 years old and 36 when he is 66 years old. Thus, "wealth age" is the length of U.S. residence for immigrants who arrived after age 24. While this "wealth age" captures more accurately the wealth accumulation of immigrants within the U.S. and provides a comparable scale for natives, it assumes that immigrants do not bring in wealth at arrival.[3] "Wealth age" accounts for the fundamental difference between immigrants and the native-born in their wealth accumulation in the U.S. By providing a scale-comparable basis, "wealth age" assists us in describing the age-wealth profile gap between immigrants and natives more appropriately. In a

[3] This assumption holds for many immigrants but it could be violated when immigrants bring in business capital. However this type of immigrants is more prevalent in countries such as Canada and Australia that assign points for business capital in their point- based system for granting immigrant visas (Smith and Edmonston 1997).

multivariate framework, we can analytically tease out the conventional age effect from the years-since-arrival effect rather than combining them into "wealth age".

To test the status attainment and human capital theories, we have the following measures. For both immigrants and natives, we include the greater of the two levels of education between spouses, number of minor children, and a dummy to signify female headship of the unit. Education is the most important predictor of status in the U.S. labor market and economy. Parents of more minor children may have greater incentive to save for the demand of future human capital investment in children, controlling for other factors. Female headship is used to capture both the effect of marriage since marriage is a wealth-enhancing institution (Smith 1995; Hao 1996) and the low capacity of wealth accumulation of single mothers (Hao 1996). In addition, we include the unique characteristics of immigrants, such as age at arrival, years since arrival, naturalization status, a proxy measure of refugee status by sending countries and year of arrival[4], and whether the couple is an immigrant-native couple.

• *Social Contexts.* We use the inter-group interaction index to measure spatial integration within local communities for each immigrant group classified by country of origin and native minorities. Following the segregation literature (Massey and Denton 1988; Massey, White and Phua 1996), we define the inter-group interaction index as the probability of interaction with the white majority for members of a group defined by immigrants' country of origin group or a native race-ethnic group in the local community. In our case, the local communities are counties, which include census tracts as subareas. The spatial integration index is calculated from the one-in-six long-form data of the 1990 census. We match the index with the SIPP data by the county of residence. By definition, spatial integration is meaningful only for minorities. Blacks and

[4] We identified refugee status for those arrived after 1959 from Cuba, after 1978 from USSR or former USSR, and after 1974 from Vietnam.

Hispanics are less spatially integrated than Asians and immigrants are more spatially integrated than their race-ethnic counterparts except for Hispanics (see the distribution in Appendix Table).

Coethnic economic activity conditions how effective spatial integration is. Lower coethnic economic activity elevates the negative effect of spatial segregation. We measure coethnic economic activity by the proportion of adults (aged 16-64) who are working within each immigrant origin country group and native race-ethnic group at the county level, using the one-in-six long-form data of the 1990 census. Controlling for the state unemployment rate, the coethnic economic activity at the county level represents the effectiveness of inter-group interaction and the severity of spatial segregation rather than strictly economic resources.

One limitation of the information on social contexts in the SIPP is that it does not permit establishing a temporal order between social contexts and wealth. Because the county of residence in SIPP is the current residence, it is likely that the wealthier people have moved to affluent and integrated neighborhoods while the poorer people have moved to poor and segregated neighborhoods. To identify those who had moved within the past five years, we include a dummy indicator in the analysis. Generally, of course, we consider the relationship between current social contexts and wealth as associative rather than causative.

Our analytic tasks include descriptive and multivariate analyses. For comparisons of group differences in wealth, we use both mean and median statistics. For the age-wealth profile comparisons, we use median total net worth. For zero or negative wealth holdings, we use percentages of units that have zero or negative net worth. The compositional analysis also uses percentages, i.e., the percentage of total assets for each asset component and each debt component.

The multivariate analysis involves three steps. We first use a logit model to predict positive wealth holdings vs. non-positive wealth holdings (including zero and negative wealth).

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Second we use a multinomial logit model for the three categories of net worth holdings—negative, zero, and positive, focusing on negative holdings vs. zero holdings. Both models include two sets of interaction terms between immigrant status (minority status) and socioeconomic status, human capital and social contexts, which allow us to capture the potentially different process of sorting minimal household units into the three categories of positive, zero and negative wealth holdings. The third step of the analysis involves a tobit model of the logged positive value of net worth, treating negative and zero values as being censored rather than their true values to suite the non-monotonic nature of the wealth scale and to avoid using a selective sample of positive net worth only. The tobit model also includes those two sets of interaction terms, which help illuminate the differential relationship between the sources of wealth and the amount of positive net worth for immigrants status and for minorities.

RESULTS

The results are presented in five sections. The first three sections are devoted to descriptive analysis and the last two sections describe the multivariate analysis. First, group differences in total net worth and financial net worth are presented, organized by immigrant status within race-ethnicity groups. Section 1 also presents group differences in percent non-positive wealth and the negative share in the non-positive holdings. The second section presents the compositional analysis by immigrant status and race-ethnicity. The third section presents the age-wealth profile gaps by immigrant status, by race-ethnicity, and by both immigrant status and minority status. In the fourth section, we examine the socioeconomic and human capital factors as well as social context factors that sort minimal households into positive, zero and negative wealth holdings. We also examine how this sorting varies by immigrant status and by minority status. The fifth section focuses on the amount of positive total net worth and examines the role

of socioeconomic and social context factors and their potential differential role by immigrant status and minority status.

Race-Ethnicity Dominates Immigrant Status in Wealth Stratification

Table 1 addresses the race-ethnicity gap and at the same time shows the immigrant-native gap within each race-ethnicity group. Along the race-ethnicity line, whites and Asians are on the right tail while blacks and Hispanics are on the left tail of the wealth spectrum. Specifically, non-Hispanic whites rank at the top and Asians are second in both total net worth and financial net worth. The white-Asian difference is very small when the mean is used. However, when the median is used, we see a substantial advantage of whites over Asians. On the other end of the spectrum, blacks rank at the bottom and Hispanics at the second to the bottom. The black-Hispanic difference is substantial when the mean is used but becomes trivial when the median is used.

(Table 1 about here)

Immigrant status pushes white to move rightward along the right tail whereas immigrant status pushes Asians, Hispanics and blacks to move leftward, indicating a disadvantage among non-white immigrants. Whether this disadvantage is due to non-white immigrant status or by their socioeconomic and social context factors remains to be seen in the multivariate analysis. In addition, these immigrant-native gaps do not trump the race-ethnicity gaps: the race-ethnicity gap dominates the immigrant-native gap.

The term "non-positive" net worth includes both zero and negative net worth. Zero net worth results from having neither asset nor debt.[5] Negative net worth refers to those whose debts

[5] In our data among the 3,111 units (7.9% of the total units), which had zero net worth, 3,061 units (98.4%) had no assets nor debts. Zero net worth can also refer to those whose assets and debts exactly cancel each other out, which is rare.

are greater than their assets. Table 2 presents the percent non-positive and the negative share in the non-positive total net worth and financial net worth. Since negative holdings indicates a pursuit of greater future income or a capacity for obtaining liabilities currently and paying off debts in the future, the negative share in non-positive wealth holdings is compared among race-ethnicity groups and between immigrants and the native-born.

(Table 2 about here)

For the percent non-positive holdings of total and financial net worth, a sharp divide separates whites and Asians on one side and blacks and Hispanics on the other. The differences are quite sizable—the percentage for blacks and Hispanics doubles that for whites and Asians. In contrast, there is little difference by immigrant status within race-ethnicity groups. The pattern of negative share is more diverged, with white ranking at the top, Asian second and black and Hispanic at the bottom. These differences are substantial. For instance, more than two thirds of whites with non-positive holdings have negative holdings, a sign of greater wealth accumulation in the future, whereas the corresponding figure is only one third for blacks. In negative shares we observed discernable differences by immigrant status within race-ethnicity groups. For example, immigrant whites, Hispanics and Asians have lower negative share than their native counterparts. The only exception is immigrant blacks whose negative share is much higher than their native counterparts and are almost equivalent to that of immigrant whites. Since negative holdings result from obtaining loans from financial institution or other sources, which have confidence in the capacity of the debtors to pay off the loans, it is not surprising that immigrants are generally more disadvantaged given their shorter credit history and lack of sufficient information. The fact that native blacks do not possess this advantage as other native groups indicates their truly disadvantaged wealth status and their small likelihood toward positive wealth holdings.

Wealth Components Differ More by Minority Status Than by Immigrant Status

Table 3 compares the distribution of wealth components by immigrant status and by race-ethnicity. The statistics are percentages of total gross assets. For the total population, owner-occupied housing is the single most important asset, accounting for more than 50% of total assets. The second largest asset is real estate excluding owner-occupied housing, at about 9% of total assets. Liabilities account for a substantial percentage of total assets at 28%, of which mortgage of owner-occupied housing is the primary liability.

(Table 3 about here)

Table 3 reveals much commonality between immigrants and natives and only moderate immigrant-native differentials. Immigrants tend to have a smaller percentage of the gross assets in vehicles (perhaps fewer or less expensive cars) and for retirement accounts. The smaller percentage of retirement accounts of immigrants calls for concern over their potential lower old age security, particularly for those who arrived in the U.S. at older ages, those who have worked fewer years in the U.S., and those who have lower levels of Social Security. The asset in which immigrants have larger percentages is real estate excluding the principal residence. Immigrants do not own greater business gross values than natives, which is inconsistent with the immigration literature on ethnic economy and immigrant entrepreneurship (Sanders and Nee 1993; Portes and Rumbout 1996). Immigrants have a larger percentage of total liabilities than natives. Larger percentages in mortgage of principal residence and other secured debts contribute to this gap. The latter is most likely debt on rental properties. Immigrants do not necessarily hold larger business debts either, partly because immigrants are more likely to operate small businesses using their own financial capital or loans from rotating-credit associations rather than business loans from financial institutions (Granovetter 1995).

In contrast, the differences in wealth composition are large across race-ethnicity groups. The principal residence accounts for two thirds of the total assets among blacks and Hispanics versus only one half for whites and Asians. Blacks have a much larger percentage of vehicle value than other groups. Whites hold the lead in business assets, interest-generating and non-interest-generating accounts, stocks and mutual funds, and retirement accounts, examples of modern investment strategies and old-age security orientation. Asians, on the other hand, hold the lead on rental properties, exhibiting a traditional investment strategy. Consistent with the composition of their assets, blacks and Hispanics show a much larger percentage of gross assets that is the mortgages for the principal residence than whites and Asians. Unsecured debts, such as credit card balance, make up a high percentage for blacks but not for Hispanics.

Overall, our wealth component analysis shows that differences by immigrant status are mild while the differences across race-ethnicity groups are sharp. Are the differences by minority status also large? Since minority status combines black, Hispanic and Asian groups, which are very different, we do not expect to see as sharp differences by minorities as a whole as by race-ethnicity. Nonetheless, the white-minority differences are much larger than the native-immigrant differences in virtually all asset components.

Age-Wealth Profiles Diverge More by Race-Ethnicity Than by Immigrant Status

Figure 1 depicts the age-wealth profiles for immigrants vs. natives using both conventional age and the "wealth age" constructed for immigrants. The age-wealth profile for natives confirms the life cycle pattern—wealth increases with age and the tipping point is about age 66. Using conventional age, the age-wealth profile of immigrants appears below that of natives—with a moderately lower growth rate and a tipping age around 62.

However, using "wealth age", we see a different pattern for immigrants. The age-wealth profiles for immigrants and natives start from the same low point; then the immigrant profile is flatter than the native profile for the first 24 years of "wealth age", and at the 24th wealth age immigrants begin to overtake natives. Since "wealth age" is essentially the length of U.S. residence for immigrants who arrived after age 24, it captures immigrants' wealth accumulation process more accurately. Using "wealth age" shows that immigrants are more disadvantaged in the first 24 years after arrival.[6] It takes them a quarter of a century to catch up with natives. However, immigrants eventually overtake natives in wealth. While it appears that "wealth age" is more accurate in portraying age-wealth profile for immigrants, a caveat is in order. When we use "wealth age", we assume that immigrants bring little wealth on arrival. One possible exception is that some immigrants bring in business capital. However, this possibility might change the age-wealth profile using "wealth age" only to a mild degree since our compositional analysis shows that the gaps in rental property assets between immigrants and natives amount to only about 5% of the total assets.

(Figure 1 about here)

Figure 2 presents a striking contrast in age-wealth profiles between the white and Asian groups on the one hand and the black and Hispanic groups on the other. We use conventional age in these profiles. The age-wealth profile for whites reaches a high of $107,000 in median net worth. The age-wealth profile for Asians lies close to that for whites although it fluctuates particularly after midlife, due to small cell counts for the Asian group in general and for later ages in particular. In contrast, the age-wealth profiles for blacks and Hispanics are very flat, never exceeding $40,000 in median net worth over lifetime. Compared with the immigrant-

[6] Chiswick (1978) showed that it took 15 years for immigrant earnings to overtake native earnings in the 1970s and Borjas (1994) showed that the more recent immigrant cohorts had a similar earning growth as the earlier cohorts despite their lower starting position.

native gap when using conventional age as shown in Figure 1, the white/Asian-black/Hispanic gaps are much larger as shown in Figure 2.

(Figure 2 about here)

Figure 3 presents the gaps in age-wealth profiles by immigrant and minority status, using conventional age. Within the white group, the immigrant profile fluctuates due to the small size of age groups but the underlying profile lies very close to that of native whites. Within minorities, the immigrant profile is a little higher in the first half of the profile and somewhat lower for the second half of the profile. Figure 3 also shows large white-minority gaps within immigrants and natives groups, respectively.

(Figure 3 about here)

Figure 4 repeats Figure 3 except that the wealth age is used. The picture clearly shows that immigrants are doing better than their native counterparts. In addition, because of the greater achievement among immigrant minorities, the wealth stratification in the U.S. is not as sharply divided.

(Figure 4 about here)

What Predicts Positive and Negative Wealth Holdings?

Turning to our multivariate analysis, we first show the descriptive statistics of the variables used in the analysis by immigrant and minority status in Table 4. Immigrants make up 6% of whites but 29% of minorities. Non-whites make up 60% of our immigrant sample but 19% of our native sample. Comparing immigrant and native samples, we see (1) immigrant families have more minor children, fewer female-headship, and lower educational levels and (2) immigrants live in states with high unemployment rates, immigrant minorities have lower levels of spatial integration, and the percentage of economically active coethnics is lower for

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immigrants. The white-minority differences are larger than the immigrant-native differences in number of minor children, female-headship, and education. Among unique characteristics of immigrants, about 8% of them are refugees, more than 20% of immigrant units contain an immigrant-native couple, almost half of the immigrants are naturalized citizens, and they arrived in the U.S. at an average age of 25.

(Table 4 about here)

Next, we examine the socioeconomic and human capital effects on and social context association with positive, zero, and negative wealth holdings. We first predict positive vs. non-positive (zero and negative) holdings using a logit model. We then focus on the negative vs. zero holdings, keeping positive holdings as a third category in a multinomial logit model. We present the logit and multinomial logit estimates in Table 5. The coefficients represent the changes in log odds of positive vs. non-positive net worth in the logit model and negative vs. zero holdings in the multinomial logit model. The models include two sets of interactions of the socioeconomic and social context variables with immigrant status and with minority status. We present the results in one column for the main effects and in two columns for the interactive effects. The main effects apply to the whole sample while the interactive effects apply to the particular subsample and capture the additional effects for each particular subsample beyond the main effects. For example, in the logit estimates, the main effect of education is .134, i.e., the higher the education, the more likely a unit has positive holdings. However, for immigrants, the interactive effect is -.146, offsetting the positive main effect of education (.134-.146), indicating that higher education does not increase the probability of positive holdings among immigrants. In contrast, the interactive effect for minorities is .045, strengthening the education effect (.134+.045) for minorities.

(Table 5 about here)

Examining the logit estimates for positive holdings, we see a strong positive effect of immigrant status. All else equal, the probability of positive holdings for an immigrant unit is 8.94 ($e^{2.191}$) times that of a non-immigrant unit (or the probability for a non-immigrant unit is 11.2% of that for an immigrant unit). Evaluating at the mean probability of positive net worth, immigrant status increases the probability of positive holdings by .137.[7] Race-ethnicity also plays an important role; all minority statuses reduce the probability of positive holdings. Controlling for other factors, black status reduces the probability of positive holdings by .379 and Hispanic status reduces the probability by .274, when evaluated at the mean. Thus, our results reveal that the positive effect of immigrant status mitigates the negative effect of race-ethnic minority status to a great degree. However, immigrant status does not offset completely the disadvantage of minorities.

The model specification for testing the life cycle hypothesis is different between natives and immigrants. For natives, we look at the estimates of age and age-squared and the age coefficients support the life cycle hypothesis—the probability of positive holdings increases with age but at a diminishing rate. For immigrants, the combination of the estimates of age, age squared and years since arrival captures the life cycle effect. We see that the coefficient for years since arrival is small and statistically non-significant. While the age coefficients also support the life cycle hypothesis for immigrants, the quadratic age effect, however, is relatively stronger for immigrants, opposite our expectation.

To test the status attainment and human capital hypotheses, the model allows the estimates to differ between immigrants and natives. We hypothesized that families save for children's future education and we have found that the larger the number of minor children, the greater the probability of positive holdings, although there is no greater effect for immigrants.

[7] See the method of calculating the change in the probability for a dummy variable in Petersen (1985).

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Female headship has a detrimental effect, more so for immigrants, perhaps because immigrant single mothers face greater barriers than native single mothers. Education has a beneficial effect. This effect is offset for immigrants and strengthened for minorities. The weaker effect of education for immigrants is presumably due to the education discount for immigrants and the stronger education effect for minorities reveals that the economic rewards for minorities hinge primarily on their education.

Immigrants' unique socioeconomic variables are important and follow our hypothesis. For example, refugee status has a negative effect, which does not offset the positive effect of immigrant status. Immigrant-native couples and naturalized immigrants are more likely to have positive net worth. The later the age at arrival, the lower the probability of positive holdings.[8] However, this negative effect is mitigated by the education level.

Turning to the contextual effects, we see that a poor economy in the state of residence captured by unemployment rates is associated with a lower probability of positive holdings. Since spatial integration is defined as interaction with whites, it is irrelevant for whites and we impose a zero coefficient for whites. Thus the coefficient in the third column is the main effect for all minorities and the coefficient in the second column is an interactive effect for immigrant minorities. Spatial integration increases the log odds for minorities, which is weaker for immigrants (1.038-.404). Evaluated at the minority mean, a .10 increase in the spatial integration index (which ranges from 0 to 1) increases the probability of positive net worth by .02. Evaluated at the immigrant minority mean, the same improvement in spatial integration increases the probability by only .01 for immigrants. This evidence supports our hypothesis that immigrants' ethnic economy buffers the harm of spatial segregation. Positive net worth does not

[8] We are able to identify the effects of age, years since arrival and age at arrival for immigrants, which are collinear, since we impose zero coefficients for natives in this pooled immigrant-native analysis.

appear to be related to the degree of coethnic economic activity. Moving within the past 5 years indicates a greater probability of positive holdings.

We next investigate whether negative holdings systematically differ from zero holdings, while considering positive holdings as a third category. The three columns on the right side of Table 5 show the coefficients for negative holdings vs. zero holdings and the table does not present the coefficients for positive holdings vs. zero holdings for simplicity. The signs and significance levels of the main effects for many predictors are remarkably similar to those in the positive holdings equation, albeit some differences in their magnitudes. These include the positive effect of immigrant status, the negative effects of minority groups, and the effects of age, number of children, female-headship and education. Social contexts, however, exhibit some differences. State unemployment rate is not associated with the log odds of negative holdings to zero holdings while the degree of coethnic economic activity is. It appears that loans are not necessarily easier to obtain from any coethnic but are easier to obtain from those coethnics who are more economically active. A residential move in the past 5 years lower the probability of negative holdings; perhaps stable residence increases the trust of creditors. Most of the interaction effects for negative holdings are different from those for positive holdings. For instance, the positive effect of age is stronger for minority, indicating that it requires longer years for minorities to obtain solid credit records. The number of children has a weaker positive effect for minorities, indicating the inability of large minority families to obtain loans as compared with large white families. Female headship has a weaker negative effect for minorities, possibly reflecting the development of economic strategies in minority female-headed families. Unlike for positive wealth holdings, spatial integration benefits all minorities, natives and immigrants alike, indicating loans depend more on the economic prosperity of coethnics rather than merely contact with coethnics. In sum, immigrant status, non-minority status, higher socioeconomic

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status, and more active coethnics are conditions under which negative wealth holdings are more likely.

What Predicts the Amount of Positive Net Worth?

Turning to an investigation of positive net worth, we use a tobit model. The tobit model also includes the main effects and two sets of interaction effects as in the previous logit and multinomial logit models. The positive net worth is transformed using a natural logarithm so that the coefficients indicate percentage changes in positive net worth. We present the results in Table 6.

(Table 6 about here)

Immigrant status has a strong positive effect on the amount of positive net worth, increasing the total net worth by 438%. In contrast, minority status reduces the amount of net worth—e.g., black status reduces the amount by 414%. A supplemental analysis for how immigrant status differentially mitigates each race-ethnic group shows that, all else equal, immigrant blacks and immigrant Hispanics still have significantly lower level of net worth than native whites, albeit the negative effects are weaker than for their native counterparts. The positive coefficient of age and negative coefficient of age squared support the life-cycle hypothesis for both natives and immigrants. Again, the negative age-squared effect is stronger for immigrants. Years since arrival have little effect on immigrants' net worth after controlling for the age effect. Like the effect on the binary outcome of positive vs. non-positive wealth holdings (the logit estimates in Table 5), number of children increases the amount of positive holdings. Female headship reduces the amount, more seriously for immigrants and for minorities. Like the education effect for the binary positive holdings, education increases the amount of positive holdings with the effect discounted for immigrants but enhanced for

minorities. Immigrants' unique characteristics also determine the positive net worth in that immigrant-native couples and naturalized immigrants tend to have higher amounts of net worth. Refugee status has a negative effect, reducing the amount by 75%. Age at arrival has a strong, significant effect on the amount: for every additional year of age at arrival, the positive net worth declines by about 10%, supporting our idea that the "wealth age" of immigrants needs adjustment by age at arrival.

Social context relationships are as expected. Higher state unemployment rates reduce the amount. Spatial integration is positive (1.793) for minorities and the effect is weaker (1.793-.964) for immigrants, again supporting our hypothesis about the buffering effect of immigrant ethnic economy. Moreover, the spatial integration effect remains positive for immigrants, which supports our hypothesis that spatial integration would outweigh the effect of ethnic economy. Different from the findings for the binary positive wealth holdings is the significant, positive effect of coethnic economic activity uniformly for all, regardless of immigrant status or minority status.

DISCUSSION

By including immigrants in a wealth analysis, this study advances our understanding of not only present-day wealth stratification in the U.S. but also the process by which it is often achieved. The question as to whether immigrant status is important in wealth stratification is approached in both descriptive and analytic ways. Descriptively, we examine whether the observed wealth distribution of total and financial net worth, life-cycle wealth accumulation (age-wealth profile), zero vs. negative wealth holdings, and business and other self-employment-facilitating assets and debts vary by immigrant status. Analytically, we examine whether the

effects of factors on wealth accumulation vary by immigrant status, and contrast these results to those by race-ethnicity.

The descriptive analysis demonstrates that immigrant status is not as critical for wealth stratification as race-ethnicity. Differences in wealth distribution, non-positive wealth holdings, the negative share of non-positive holdings, as well as wealth components are primarily stratified by race-ethnicity rather than by immigrant status. When immigrants' age at arrival and length of U.S. residence are taken into consideration, their age-wealth profiles exceed native wealth profiles after 24 years of their arrival.

Our multivariate analysis confirms the life cycle hypothesis that people save until about the beginning of retirement ages and dissave after that. We also confirm the adverse effect of later age at arrival for immigrants. We hypothesized that the tipping point is later for immigrants than for native-born Americans because of the higher educational expectation for children and inheritance motivation among immigrants. However, our results do not support this hypothesis. We suspect that because immigrants are less prepared for old-age security than natives, as shown in our compositional analysis, the growing costs in health care and old-age care may drain net worth at a greater rate for immigrants than for natives.

Regarding the status attainment and human capital hypothesis, our results confirm that race-ethnic minority status, lower education, and non-traditional family structure all contribute to a lower level of wealth. As we expected, education has a strong discounted effect for immigrants. Immigrants' history of migration and adaptation, such as early age at arrival, naturalization, and immigrant-native intermarriage, all significantly promote wealth levels.

Our hypothesis about the role of spatial segregation is supported for both immigrants and native-born minorities. Also as expected, the spatial segregation effect is weaker for immigrants than for native-born minorities because of the potential protective effect of immigrants' ethnic

economy. Our results also confirm that the spatial segregation effect outweighs the ethnic economy effect in wealth accumulation.

Finally, as we hypothesized, we find that immigrant status promotes wealth accumulation, in contrast to the impairing effect of race-ethnicity, after controlling for life cycle, socio-economic and human capital, and social context variables. It appears that the selection of immigrants on motivation overcomes the adversities and discrimination facing immigrants. We also confirm that refugee status counteracts part, but not all, the promoting effect of immigrant status. These findings have important implications for social stratification, spatial segregation, and immigrants' assimilation, as well as for understanding race-ethnic differences.

The implication for wealth stratification is twofold—(1) immigrant status matters in wealth stratification in a complicated way and (2) race-ethnicity remains a powerful determinant of the stratification of wealth. In the past two decades immigrants have made up an increasing proportion of the population (Smith and Enmonston 1997) and their education and skill levels have declined (Borjas 1994). Whether immigrants constitute the bottom stratum of the society becomes a pressing question to which this study provides fresh answers. First, our study provides strong evidence supporting the persistence of wealth stratification by race-ethnicity in the presence of a growing population of immigrants. Second, when adjusted for immigrants' age at arrival and length of U.S. residence, the direction of the immigrant-native gap in age-wealth profile is reversed—immigrants reach a higher level of total net worth than do the native-born after 24 years within arrival. Third, all else equal, immigrant status actually promotes wealth accumulation. Fourth, the migration and adaptation history of immigrants plays a role in wealth accumulation. Finally, human capital effects and spatial segregation effects are weaker for immigrants than for natives. All these strongly suggest that studies on social stratification of

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wealth should include immigrant status and related attributes and pay special attention to the differential structural effect of factors of wealth accumulation by immigrant status.

The implications for spatial segregation are twofold. First, our study confirms the importance of spatial segregation by race-ethnicity in wealth stratification. Wilson (1987) emphasizes the importance of economic conditions such as a mismatch of local residents and available jobs that may outweigh racial segregation in the deepening of social inequality. Massey et al. (1994) however contends that persistent racial segregation remains the main force shaping social inequality. Our finding supports Massey's argument by providing further evidence that spatial segregation deepens the race-ethnic division of wealth. Our study also reveals that spatial segregation is complicated for immigrants. Being segregated from whites does not seem to do as much harm for immigrants as for native-born minorities. However, this protection does not completely offset the detrimental effect of spatial segregation.

Our study also has implications for immigrant assimilation. Our findings suggest that, to a large degree, immigrants assimilate to their native counterparts defined by race-ethnicity in wealth accumulation. After arrival in the U.S., immigrants seem to follow the path of their native counterparts in wealth accumulation. Shaped by the economic structure and the race-ethnic stratification of the host society, the wealth accumulation of immigrants follows the race-ethnic tracks. At the same time, immigrants are protected by their immigrant status, reflecting the potential selection on motivation among migrants. Portes and Zhou (1993) proposed that immigrants do not necessarily assimilate to the mainstream society; rather they tend to assimilate to the communities where they are located and surrounded. Thus, deteriorating communities may lead to downward assimilation (most cases are of the same race-ethnicity) while prosperous communities may lead to upward assimilation. Our findings suggest another form of segmented assimilation—segmented by race-ethnicity, which is above and beyond geographic communities

and shaped by the dual labor market and the dual housing and property market in the U.S. In addition, immigration continuously brings in new highly-motivated minority immigrants, which buffers the disadvantage of minority status and narrows the white-minority gap in wealth stratification in the U.S.

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